

**Phase I Environmental Assessment for the  
N.E. Hangar Leased Property  
King County International Airport  
King County, Washington**

**May 12, 1998**

*Prepared For :*

King County Division of Capital Planning and Development  
Department of Construction and Facilities Management  
King County Administration Building  
500 Fourth Avenue, Room 320  
Seattle, Washington 98104-2337

AGI Project No. 14,309.461

*A Report Prepared For :*

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N.E. HANGAR LEASED PROPERTY  
KING COUNTY INTERNATIONAL AIRPORT  
KING COUNTY, WASHINGTON**

May 12, 1998

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Figure 1 Vicinity Map

Figure 2 Site Plan

## 1.0 INTRODUCTION

This report presents results of a Phase 1 environmental assessment (EA) performed on the five rows of T-hangar buildings, (also known as the NE Hangar site) at 6627, 6653, 6677, 6703, and 6727 Perimeter Road South in Seattle, Washington. AGI Technologies (AGI) and EcoChem, Inc. (EcoChem) conducted this work at the request of King County. AGI's services were conducted in accordance with our March 19, 1998 proposal, work order No. 14, contract No. E73042E-A. EcoChem is a subconsultant to AGI under contract No. E73042E-A. This EA was conducted to evaluate potential environmental risks associated with the subject property due to hazardous and regulated materials. The Phase 1 EA was performed in general accordance with ASTM Methods E1527-97 and E1528-96.

### 1.1 INVOLVED PARTIES

King County currently owns the property and onsite hangars and leases the hangars to both individuals and businesses. It is currently intended that the existing hangars will be demolished. A portion of the property will be leased to Classic Helicopter. Classic Helicopter intends to expand its current operations by constructing an additional hangar bay to accommodate aircraft and/or helicopters. King County will redevelop the remainder of the land with new T-hangar buildings. King County requested this Phase 1 EA to establish baseline conditions of the property prior to redevelopment.

### 1.2 PURPOSE AND SCOPE OF WORK

This Phase 1 EA was conducted to evaluate potential environmental risks associated with the site due to hazardous chemicals and other hazardous materials. Project tasks included:

- Reviewing past and current land use for indications of the manufacture, generation, use, storage and/or disposal of hazardous substances at the site.
- Evaluating the potential for site soil and/or groundwater contamination resulting from past or current site land use activities, and to the extent possible, nearby operations.
- Recommending further investigations, if necessary, to evaluate whether contamination or environmental hazards may exist at the locations identified.

The specific scope of work included:

- Reviewing site history. We prepared a site history based on historical information, maps, and interviews with individuals having past or current site knowledge.
- Visiting and investigating the site. We identified current use and existing conditions of the property and types of land use and environmental conditions near the site. We also assessed (to the extent possible) the presence and use of hazardous chemicals and underground storage tanks (USTs) at and near the site.

- Reviewing regulatory records. We reviewed regulatory agency records regarding environmental violations or reported incidents, storage or disposal practices for hazardous materials, status of any underground storage tanks, and nearby hazardous waste sites.

This Phase 1 EA summarizes the information outlined above. The property location and results from the site visit are described in Section 2.0. The environmental setting is described in Section 3.0. Results from the regulatory review are reported in Section 4.0. Historical research is presented in Section 5.0. Results of the EA are presented in Section 6.0.

### 1.3 PREVIOUS ENVIRONMENTAL/GEOTECHNICAL INVESTIGATIONS

King County Airport Engineer Jeffrey Winters has no knowledge of any prior environmental assessments or geotechnical investigations of the property or the facility.

## 2.0 SITE DESCRIPTION

The Phase 1 EA reconnaissance was conducted on the NE Hangar site by Jessie Compeau of EcoChem on April 14, 1998. King County Airport Engineer Jeffrey Winters was available during this inspection to provide access to most of the locked hangars and to answer questions. Several telephone conversations with people knowledgeable of the site provided additional useful information. Site conditions at the time of the visit are depicted in representative photographs (**Appendix A**) and are recorded on a Transaction Screen Questionnaire (**Appendix B**).

### 2.1 LOCATION

The NE Hangar facility is sited on a 2.96 acre parcel located at 6627, 6653, 6677, 6703, and 6727 Perimeter Road South (**Figures 1 and 2**). This road parallels the east perimeter boundary of the King County International Airport.

### 2.2 SITE AND VICINITY CHARACTERISTICS

#### 2.2.1 Site Improvements

Five rows of T-hangars (0.74 acres of total hangar area) are comprised of typical wood frame construction with wood trusses and corrugated aluminum exterior facing. The flooring in each hangar is concrete slab. Each hangar is about 33' wide by 180' long with about 70' of blacktop between each row. The buildings were constructed between 1958 and 1961. The five hangar buildings are each comprised of between four and six T-shaped hangars. Several of the hangars have small storage units at either end of the building. Each individual hangar can be accessed by metal sliding doors. Several tenants, over the years, performed minor improvements inside the hangar spaces, such as creating loft space and placing wall board over the wooden trusses. No waste drains were observed inside the hangars.

The property is relatively flat and the entire site is paved. There is temporary cyclone fencing between Perimeter Road South and the general site area to control access to King County International Airport, including the NE Hangar and other nearby businesses.

#### 2.2.2 Current Uses of the Property

King County leases individual spaces in the hangars on site to individuals and businesses desiring storage space for aircraft. Several tenants also store items other than airplanes (e.g., motor vehicles) in their hangar space. Minor maintenance activities are also conducted on aircraft in the hangars.



### **2.2.3 Current Uses of Adjoining Properties**

Property in the vicinity appears to be mostly commercial/light industrial. Land uses adjacent to the site are as follows:

- To the north: commercial/light industrial - Classic Helicopter.
- To the east (beginning adjacent to the site and progressing farther east): Perimeter Road South, Airport Way South, Burlington Northern Railroad, commercial and light industrial businesses (i.e., Universal Printing, Pacific Multiforms, Nicholas Truck and Tire Center, Sa-Brand Motor Freight Company), and Interstate 5.
- To the south: King County Jet Center.
- To the west: King County International Airport.

Likely or obvious sources of contamination to the NE Hangar site from adjacent properties were not identified.

## **2.3 HAZARDOUS MATERIALS**

### **2.3.1 Materials Use**

Several hangars and rooms were not available for inspection because tenants had installed personal security locks. Of the 28 hangars and six rooms at the NE Hangar site, two hangars (14-3 and 10-2) and three rooms (14-E, 14-W, and 13-W) were not viewed. Based on observations made during the site visit, the hangar spaces are primarily used to house airplanes, and the rooms are primarily used for storage. Of the 26 hangars viewed, seven were empty and two (14-5 and 13-6) were used to store miscellaneous items (e.g., spools of cable). The remaining 17 hangars were used to store airplanes and/or items related to maintenance of airplanes (various types and quantities of chemicals and tools as described below).

Most of the tenants at the NE Hangar site perform at least minor maintenance on their aircraft. Typical operations conducted by these tenants include:

- Oil changing and grease and lubricant removal and replacement.
- Engine parts and equipment cleaning.
- Fluids replacement.
- Welding repair operations on prefabricated equipment.
- Light body work and repair.

Types of chemicals stored in the hangars, incidental to aircraft maintenance onsite, include motor oil, acrylic urethane, urethane hardener, universal basecoat, buffer polish, mirror glaze, corrosion inhibitors, epoxy reducers, gasoline cans, Simple Green™, engine degreasers, 12 volt-batteries, methyl ethyl ketone (MEK), and paint thinner. Of the hangars inspected, it appears that the most intensive maintenance operations are performed by individuals leasing Hangars 14-1 and 10-1 (based on the variety of equipment and the quantities and varieties of chemicals present).

### **2.3.2 Storage Tanks**

During the site reconnaissance, EcoChem personnel saw no evidence of underground or aboveground storage tanks. Historically, lessors have heated hangars using propane or kerosene.

### **2.3.3 Waste Generation and Disposal**

Typical wastes generated by aircraft maintenance operations onsite include used engine oil, spent lead-acid batteries, used tires, degreasers, scrap metal, unused paint, and used oil and fuel filters. Specific disposal practices followed by the tenants were not ascertained; however, no evidence was observed that would suggest that wastes generated by these operations had been disposed of improperly. Also, as noted in Section 2.2.1, no waste drains were observed inside the hangars.

### **2.3.4 General Housekeeping**

General housekeeping varied according to tenant. Most tenants stored their chemicals on shelves inside their respective hangar. The tenant occupying Hangar 14-1 had several drip pans, containers for used oil (some were partially full), and two 5-gallon buckets on the floor near a 55-gallon drum of used oil. The tenant occupying Hangar 10-1 had an engine block mounted on sawhorses with a 5-gallon bucket under the engine block as a drip pan. Used rags were on top of a nearby 55-gallon drum of aviation oil.

Inside the hangars, surficial staining was observed on the floor underneath several of the airplanes. The tenant in Hangar 11-5 had used an absorbent for a minor oil spill underneath the aircraft while the engine was undergoing repair. No surficial staining was observed on the paved areas between the five rows of T-hangars, nor on the adjacent properties. No other stained ground or evidence of other spills, indicating the presence of potentially hazardous materials, was observed at the NE Hangar site.

## **2.4 OTHER CONDITIONS OF POTENTIAL CONCERN**

### **2.4.1 PCBs**

Prior to 1979, PCB-containing oils were commonly used in transformers and fluorescent light ballasts. After 1979, this use was banned. Several pole and pad mounted transformers were observed along Perimeter Road South which abuts the east side of the site. No fluorescent light fixtures or transformers were observed in the hangars or offices.

### **2.4.2 Asbestos-Containing Materials**

The NE Hangar site was inspected by King County on January 22, 1997, for suspected asbestos-containing materials (ACM). Bulk samples were collected on suspect ACM in each hangar. Laboratory results indicate that the window putty contains asbestos in hangars 6653, 6677, and 6727. Asbestos-containing building materials were identified in the floor tile in storage unit 10-W (Hangar 6727). Prior to demolition, the ACM must be removed from the buildings in compliance with Washington State Department of Ecology and Puget Sound Air Pollution Control Agency Regulations (Buffington, 1997).

### **2.4.3 Lead-Containing Materials**

Since 1977, the Consumer Products Safety Commission has limited lead content in most paints to 0.06 percent. Prior to this, paint commonly contained higher concentrations of lead. Paint that is high in lead can cause human health problems if ingested. In addition, landfills may not accept demolition debris that contains lead paint due to potential environmental concerns. The NE Hangar site was inspected by King County on January 22, 1997 for suspected lead-containing materials. No suspect lead-containing materials were observed at the NE Hangar site. Therefore, bulk samples for lead analysis were not collected (Pham, 1998).

### **2.4.4 Radon**

As described in *The EDR-Radius Map with GeoCheck™* presented in **Appendix C**, the site vicinity is ranked in the low radon potential group due to the presence of rock types not associated with uranium. The available data for this area is 0.2 picocuries per liter (pCi/L), which is well below the recommended action level of 4 pCi/L.

### 3.0 ENVIRONMENTAL SETTING

#### 3.1 REGIONAL PHYSIOGRAPHIC CONDITIONS

The site is located in the Puget Sound Lowland, a north-south trending structural and topographic depression bordered on the west by the Olympic Mountains and on the east by the Cascade Mountains. It is underlain by Tertiary volcanic and sedimentary bedrock and filled to the present-day land surface with Pleistocene glacial and nonglacial sediments.

#### 3.2 SOIL/GEOLOGIC CONDITIONS

Published regional geologic information (Waldron, et. al., 1962; Liesch et. al., 1963) indicates the site is located in an area of the Duwamish River Valley that has undergone extensive modification (i.e., filling and channelizing). Native sediments underlying the site are recent alluvial deposits that consist chiefly of sand and silt but also include clay and peat. These deposits may be 300 feet thick or more and are in turn underlain by older unconsolidated deposits and marine sedimentary rocks.

#### 3.3 HYDROGEOLOGIC CONDITIONS

The first encountered groundwater is expected to be less than 25 feet below ground surface. Water obtained from wells that tap the recent alluvium of the Duwamish River Valley tends to be objectionably high in chloride content. The principal aquifers are in the unconsolidated material that lie at depths as much as 300 feet below the valley floor (Liesch et. al., 1963). Based on the regional topography and location with respect to the Duwamish River, we expect the direction of groundwater flow to be southwest to northwest, toward the river.

#### 3.4 SURFACE WATER FLOW

The site is relatively flat. Based on topography, surface water at the site flows toward storm drains serviced by the King County International Airport. The storm drains at this site are located along the west perimeter.

Stormwater run off from the King County International Airport stormdrain system is conveyed by underground storm drain lines to oil-water separators. The King County International Airport holds a National Pollution Discharge Elimination System (NPDES) permit for Baseline and Maintenance Activities (Winters, 1998).

## 4.0 RECORDS REVIEW

As a part of the Phase 1 EA, state and federal databases were reviewed to identify and evaluate sites that generate, transport, store, or dispose of hazardous materials or that have known or potentially identified contamination that could adversely impact the property. Our research was conducted according to (at minimum) current ASTM standards for environmental site assessments. The EDR-Sanborn Company was contracted to perform analysis and reporting of regulatory agency databases. The *EDR-Radius Map with GeoCheck™* is presented in **Appendix C**.

### 4.1 FEDERAL RECORDS SOURCES

**National Priority List (NPL).** The National Priority List identifies sites for priority cleanup under the Superfund Program. There are no NPL sites within a one-mile radius of the NE Hangar site. The NE Hangar site is not a listed NPL site.

**CERCLIS List.** The CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) list is a compilation of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have been investigated, or are currently under investigation by the Environmental Protection Agency (EPA) for possible inclusion on the National Priorities List (NPL). There are no CERCLIS sites located on or within 0.5 mile of the NE Hangar site.

**RCRIS (Resource Conservation and Recovery Act Information System) List.** The EPA maintains a list of facilities that generate, transport, store, treat and/or dispose of hazardous material, as required by the Resource Conservation and Recovery Act (RCRA). The site was not listed in the database. There are two small-quantity generators within 0.25 mile of the site: Washington Natural Gas at 6349 18<sup>th</sup> Avenue South and Universal Printing at 6600 Ursula Place South. There is one large-quantity generator within 0.25 mile of the site: Marine Vacuum Service, Inc. at 1516 Graham Street, which is also listed as a facility that transports hazardous material. The Orphan Summary also lists Collins Aviation and Galvin Flying Service at 6660 and 6987 Perimeter Road South as small-quantity generators. Collins Aviation building at this location was demolished in 1997. There are no RCRIS treatment, storage, or disposal facilities within 0.5 miles of the facility.

**ERNS (Emergency Response Notification System).** All phone calls made to the National Response Center (NRC) are documented in the ERNS database. The NRC may be contacted to report any number of types of toxic substance spills or releases. The NE Hangar site is not listed in the database.

### 4.2 STATE RECORDS SOURCES

**Confirmed and Suspected Contaminated Sites.** Twenty facilities or sites within approximately one mile of the property are included in Washington State Department of Ecology's (Ecology) list of potential or confirmed contaminated sites. Of these twenty sites, eighteen are greater than ¼ mile away and are likely cross gradient or downgradient of the site with respect to the expected direction of groundwater flow.

Two facilities within a quarter-mile radius of this site are potentially upgradient with respect to groundwater flow: North Coast Chemical Company, on 6300 17<sup>th</sup> Avenue South and Marine Vacuum Services, Inc. at 1516 Graham Street. North Coast Chemical Company (a chemical supplier that repacks chemicals for retail) is listed in Ecology's IRAP database as "undergoing independent remedial action." Marine Vacuum Services (a bilge and barge cleaning service) is "awaiting remedial action" (criminal action was undertaken by Ecology to enforce the cleanup process at Marine Vacuum Services [Peck, 1998]). Based on their relative proximity and contaminants of concern, we researched available information on these sites at Ecology. Our findings are presented in Section 4.3

**Washington Independent Cleanup Reports (ICR).** This list identifies remediation reports received by Ecology from the site owners/operators. The remedial action(s) have been conducted without Ecology oversight or approval and are not under an order or decree for such remediation. ICRs have been received for ten sites within approximately 0.5 mile. All of these sites are listed as undergoing or having undergone remedial action. Of the ten sites within 0.5 miles, seven are considered to be downgradient of the NE Hangar site. The remaining three sites are American Avionics, Zellerbach Paper Company, and North coast Chemical Company. Based on American Avionics and Zellerbach Paper Company's relative distances and expected cross gradient direction with respect to groundwater flow, it is unlikely that these facilities have the potential for impact to the NE Hangar site. The North Coast Chemical Company site is discussed further in Section 4.3.2. Refer to page 4 of the executive summary in **Appendix C** for a summarized listing of ICR sites or pages 9 through 25 for information by site, as well as the Orphan List Summary in **Appendix C**.

**Underground Storage Tank Program.** Information was obtained on the locations of active and inactive registered underground storage tanks (USTs) and leaking underground storage tanks (LUSTs) from the databases maintained by Ecology. There are no registered USTs on the site or adjoining properties. There are no LUSTs on the site. There are, however, eight LUST sites within approximately 0.5 mile of the site. These properties include North Coast Chemical Company, Zellerbach Paper Company, Mikes Mobil Service, King County Airport, Georgetown Steamplant (now a museum), A & T Pump, Motor Pool, and Texaco (#63-232-0377). Of these, one site (North Coast Chemical Company) is potentially upgradient of the NE Hangar site. Ecology did receive an interim cleanup report for this site; however, EDR and Ecology records do not indicate that the LUST was cleaned up (Peck, 1998). Based on this, we researched available information on North Coast chemical Company in Ecology's files. Our findings are presented in Section 4.3.

**Former Manufactured Gas Sites.** A review of coal gas sites within one mile identified one: Seattle Lighting at the 6300 block of Swift Avenue, approximately  $\frac{1}{8}$  to  $\frac{1}{4}$  mile northeast of the site. Coal gas sites are often contaminated with petroleum hydrocarbons and polycyclic aromatic hydrocarbons. However, the site is not listed on Ecology's confirmed and suspected contaminated sites list, which indicates that this site has not yet been investigated.

#### 4.3 ECOLOGY FILE REVIEW

Ecology's files for Marine Vacuum and the North Coast Chemicals were reviewed. Both of these sites are north of the NE Hangar site. Marine Vacuum is approximately 800 feet away and North Coast Chemicals is about 660 feet away. The following sections summarize our findings.

#### 4.3.1 Marine Vacuum

Marine Vacuum provides cleaning services for industrial tanks and bilges of marine vessels and transports this oily waste water to their site for processing. Marine Vacuum has been cited several times in the past for improper waste handling procedures. An inspection conducted by Ecology in the late 1980s prompted requirements for Marine Vacuum to clean up their facility and conduct a subsurface investigation. A progress report was issued by Marine Vacuum in February 1989 that showed they had taken several steps to improve general housekeeping. The file also contained a 1989 proposal by Kennedy/Jenks/Chilton consultants to conduct a soil and groundwater investigation. Photographs in the file indicate this investigation was conducted, but the file did not contain the results of this investigation. In August 1991, Ecology issued an order with respect to their waste handling procedures and characterization of waste streams. The order was closed in August 1992.

In summary, the file was incomplete. Based on our review of photographs and other information in the files, soil and groundwater contamination is likely to be present at the Marine Vacuum site. We would expect the primary contaminants of concern to be the heavier end petroleum hydrocarbons; however, the files indicate that some of the wastes contain halogenated hydrocarbons. Halogenated compounds are typically more mobile in groundwater than petroleum hydrocarbons.

#### 4.3.2 North Coast Chemical Plant

The North Coast Chemical Plant operated from 1919 to 1990. It produced soaps and other cleaning products (e.g., floor waxes, detergents, wall cleaners). Ecology's files contain several assessment reports including a preliminary assessment conducted by AGI in 1988, an environmental assessment conducted by Enviro in 1991, a follow up investigation by Harding and Lawson in 1991, and additional groundwater investigation by EMCON in 1993.

Results of these investigations showed that groundwater is impacted by diesel, arsenic, and various aromatic and chlorinated hydrocarbons (i.e. ethylbenzene, xylene, tetrachloroethene [PCE], trichloroethene [TCE], dichloroethene [DCE], and vinyl chloride). Reported concentrations of the chlorinated compounds were quite high. For example, PCE was detected at 6.9 parts per million (ppm), cis-1,2-DCE at 11 ppm, vinyl chloride at 25 ppm, and TCE at 1.4 ppm.

North Coast Chemical Plant investigation results indicated a southwesterly gradient; the site is due south of the North Coast Chemical Plant. Contour maps prepared for the North Coast site indicate that one well at the downgradient edge of the site contains high concentrations of diesel and oil (2.4 and 1.9 ppm, respectively) but low concentrations of chlorinated solvents.

The relative distance of these facilities combined with the apparent cross gradient direction lessen the potential for impact to the site. However, our review did not determine that the offsite impacts had been adequately defined.

#### **4.4 LOCAL AGENCY SOURCES**

The fire department at King County Airport reported no knowledge of hazardous materials incidences on the site within the last 3 to 5 years (Dickey, 1998).

The Seattle-King County Department of Public Health reported no abandoned or active landfills or disposal sites on or within 0.5 mile of the site (Seattle-King County Department of Health, 1984 and 1986). The Orphan Summary lists a landfill at South Park located on the west side of the Duwamish River (Holmes, 1998). Based on its relative distance from the site and location with respect to the expected direction of groundwater flow, this facility is considered unlikely to impact the subject site.



## 5.0 HISTORICAL USE INFORMATION

Discussions with King County Airport Engineer Jeffrey Winters on April 2, and 14, 1998, indicate that several businesses have occupied the NE Hangar site. This information was generally confirmed by sources such as the street and Seattle telephone directories.

### 5.1 AERIAL PHOTOGRAPHS

Aerial photographs (1936, 1946, 1956, 1960, 1969, 1974, 1980, 1985, 1990, and 1995) provided by Walker & Associates of Tukwila, Washington, were reviewed for indication of historical activities. In addition, Robert Cameron's book *Above Seattle* was used to view an oblique aerial photograph taken of Boeing Field in 1933.

- **1933.** The site was a grassy part of the airfield, which lies to the west. The site was used as a tie down area for Army Air Corps biplanes (Cameron, 1994). The site is bordered to the east by Airport Way South Road. Railroad tracks were identified east of the site across Airport Way South Road. A dirt road was identified northwest of the site.
- **1936.** This aerial photograph was of poor quality and blurred in the lower left corner. The site and adjacent properties appeared to have numerous dirt roads leading to the airfield. The site is bordered to the east by Airport Way South Road. Railroad tracks were identified east of the site across Airport Way South Road. The Zellerbach Building was identified to the north of the site.
- **1946.** The airport and associated areas were disguised as a "fake city" during the war effort (Cameron, 1995) and some unidentified buildings were apparent to the north of the site in the 1946 photograph.
- **1956.** The foundation excavations are apparent where the hangars will be located. Hangars are also located south of the site. A dirt road lies between the Zellerbach building and a building just north of the site (Forrest Taylor). A building is located east of the site.
- **1960.** Four of the five T-hangars have been constructed (Building 6703 was not constructed until 1961). Several more buildings have been constructed to the east of the site.
- **1969.** Perimeter Road South was constructed. Airport Way South and Interstate 5 were extended as compared to previous photographs. The area immediately west of the site is being used for tie-down of small aircraft.
- **1974 and 1980.** The site appears similar to the 1969 aerial photograph, except an area on the east side of Perimeter Road South was used as a tie-down area for aircraft.
- **1985 and 1990.** The road that crosses on the north side of the site has been removed. The five hangars south of the site were removed sometime between 1985 and 1990.

- **1995.** Site conditions appears similar to that observed during our site reconnaissance. The Zellerbach building was demolished in 1993 (Winters, 1998) and Classic Helicopter was built in its place. Buildings north and south of the site are Classic Helicopter and King County Jet Center, respectively. All buildings on the east side of Perimeter Road South as observed on the 1995 photograph were demolished in 1997.

## 5.2 HISTORICAL MAPS

Properties in the surrounding area were covered by Sanborn Fire Insurance Maps dated 1917, 1929, 1949 and 1966. Note that prior to rechannelizing the Duwamish River, Duwamish Avenue ran parallel to the west side of the railroad tracks. After rechannelizing and redirecting the flow of the Duwamish River, Duwamish Avenue was identified as Airport Way South. In the mid-60's, Perimeter Road South, an additional access road to the airport and associated businesses, was constructed west of Airport Way South.

In 1917, unidentified buildings (7107 and 7215 Duwamish Avenue) appeared about  $\frac{1}{8}$  to  $\frac{1}{4}$  miles south of the subject site. The Duwamish River was located just west of the subject site. The 1917 Sanborn Map also identifies a number of industrial operations occurring at least  $\frac{1}{2}$  mile south of the subject site. These business operations included Denny Renton Clay and Coal Company, Terra Cotta Factory, Antimony Smelting and Refining Company, Brick Factory, and Sewer Pipe Factory. None of these buildings appear in the 1949 Sanborn Map.

In 1929, there are several buildings located about 0.25 miles west of the subject site and are identified on the Sanborn maps as Rainier Aeronautical Corporation, Coast Airlines, Inc., The Aviation School Inc., Boeing Airplane Company, and West Coast Air Transport. None of these buildings appear in the 1949 Sanborn Map. The 1929 Sanborn Map shows that more development had occurred about  $\frac{1}{2}$  mile south of the subject site. This development included King County and Boeing Airplane Company Hangars.

In 1949, two hangars are located about  $\frac{1}{8}$  of a mile south of the subject site near King County Hangars 1 and 2 near the King County Administration Building. In 1966, the subject site shows up on the Sanborn Map with development consisting of construction of buildings to east and south of the subject site.

Available topographical maps were provided by EDR for the years 1894, 1949, 1968, 1973, 1958, 1965, and 1974 (Appendix D). Review of the topographic maps provided no pertinent information.

## 5.3 LOCAL STREET DIRECTORIES

Seattle city directories (Polk's 1938, 1940, 1942, 1943-44, 1951, 1955, 1959, 1965, 1967, 1970, 1975 and 1985 and Cole's 1980-81, 1989-90, and 1994-95) were reviewed.

The 1938 directory is the first city directory with a street cross-reference. In this directory, Duwamish Road is noted to have changed (in the past) to Airport Way. It is assumed that access in this area was via Airport Way (prior to the construction of Perimeter Road South sometime between 1959 and 1965, running parallel to Airport Way).

In the 1945 directory, listings within the immediate vicinity of the NE Hangar site are the U.S. Government Army at 6645 Airport Way South and Zellerbach Paper Company at 6301 Airport Way South. Directories and other sources confirm that Zellerbach Paper Company was at this address until the building was demolished and the business moved in 1993. In the 1955 directory, businesses within the vicinity of the site included Sierra Drawn Steel Division Corporation of the Northwest (Sierra) and Titan Metal Manufacturing Company at 6600 Airport Way South. The 1960 directory indicates Sierra was still listed at the 1955 address and Sulak Aviation was listed at 6549 Airport Way South. A partial list of site addresses appears in the 1965 directory with 6653 Perimeter Road South listed as vacant and 6727 Perimeter Road South listed under Forrest Taylor's name. A partial listing of site addresses appears again in the 1980 directory with Green Valley Aviation, Inc listed at 6627 Perimeter Road South and Simulator Training at 6727 Perimeter Road South. In 1985, all sites are listed in the city directories. Collins Aviation is listed at the NE Hangar site at 6703, 6653, 6677 Perimeter Road South. Howards Aviation and Simulator Flight Training Center are listed at 6627 and 6727 Perimeter Road South respectively. The 1988, 1994, and 1997 directories either list the site addresses as vacant, not verified, or do not list any of the addresses at all.

Businesses identified in the 1965 directory that operated within the vicinity of the site were aircraft support services, including Forrest Taylor Academy of Flying, Quackenbush Lynn (generator repair), Collins Aviation Services, Slotairco, Inc., Seat Flight Services, Deltech Instruments, and Pacific Aircraft Welders. The 1970, 1975, 1980, 1985, 1988, and 1994 directories identify about 30 different businesses that operated for various on the east side of Perimeter Road South. Businesses operating in this area supported the aircraft industry. Since demolition of the buildings, these businesses have relocated at the airport or elsewhere.

## 5.4 TAX ASSESSOR RECORDS

On April 16, 1998 the tax assessor records were reviewed and indicate that the T-hangars were built during the following years: Hangars 6653, 6677, and 6727 in 1958; Hangar 6627 in 1959; and Hangar 6703 in 1961. Airport directories and available maps (1959, 1962, and 1978) were reviewed to identify historical use of the site and surrounding area. Tax assessor records indicate that Collins Aviation was one of the initial and primary lessees of the NE Hangar site. Prior to Collins Aviation, the NE Hangar site was briefly leased by FuCheck (Winters, 1998). This was not confirmed by other records. The tax assessor forms do show Sulak Manufacturing Company as the initial "fee/owner" but Sulak is crossed out and replaced by Collins Aviation. About "3 or 4 years ago," King County assumed the lease from Collins Aviation (Winters, 1998).

## 5.5 PERSONNEL INTERVIEWS

EcoChem personnel interviewed Jeff Winters of King County International Airport. Based on the information from the transaction screen questionnaire and subsequent phone interviews, Mr. Winters is not aware of any environmental permits, violations, litigation, chemical releases or underground storage tanks on the site.

## 6.0 RESULTS OF INVESTIGATION

### 6.1 FINDINGS

A review of site history shows that the site was initially used as part of an airfield beginning in the early 1930s. In the late 1950s, the site was developed into five rows of T-hangars. The area surrounding the site has historically been and is currently developed as commercial and light industrial properties.

Of the 26 hangars viewed, seven were empty and two were used to store miscellaneous items. The remainder were used to house aircraft. A number of tenants perform maintenance on the aircraft and use small quantities of hazardous chemicals. Specific disposal practices followed by the tenants were not ascertained; however, no evidence was observed that waste generated from these operations had been disposed of improperly.

A few hangars (14-3 and 10-2) and rooms (14-E, 14-W, and 13-W) were not available for inspection due to limitations imposed by security locks not compatible with King County keys. Hangars (14-3 and 10-2) and rooms (14-E, 14-W, and 13-W) are currently occupied. The two hangars are leased for aircraft storage and the three rooms are leased for storage purposes (Terrell, 1998b). Patricia Terrell also indicated that King County Airport Fire and Police departments perform quarterly inspections on airport facilities including hangars and rooms at the NE Hangar site. The King County Fire Department had no knowledge of any hazardous material incidences occurring within the past 3 to 5 years (Dickey, 1998).

A review of federal, state, and local information shows that the site is not on any of the federal or state database lists as a hazardous waste generator, as having USTs, or for known or suspected contamination.

Our research of potential offsite contamination sources identified two facilities that have some potential to adversely impact groundwater at the site. North Coast Chemical at 6300 17<sup>th</sup> Avenue South and Marine Vacuum at 1516 Graham Street are approximately 660 to 800 feet away. Petroleum hydrocarbons and chlorinated solvents are known or suspected contaminants in groundwater at these two sites. The relative distance of these facilities combined with the apparent cross gradient direction lessen the potential for impact to the site. However, our review did not determine that offsite impacts had been adequately defined.

With the exceptions noted above, no other hazardous waste sites, facilities generating or transporting hazardous waste, or leaking underground storage tanks were identified in the vicinity of the site or at locations with potential for contaminants to migrate to the property.

## 6.2 CONCLUSIONS AND RECOMMENDATIONS

### 6.2.1 Potential Soil and Groundwater Contamination

Based on our observations, surface contamination of the site pavement has occurred as a result of routine aircraft maintenance activities. However, we found no evidence that chemical spillage onto paved surfaces has resulted in significant subsurface contamination. We observed no onsite drain systems or significant cracking on the pavement that would suggest migration of contaminants into the subsurface. Based on this, we do not recommend additional investigation at this time.

Potential contaminant transport from properties north of the NE Hangar site was identified during this review. Based on the relative distances of North Coast Chemical Inc. and Marine Vacuum Services from the site and their location with respect to the likely direction of groundwater flow, these facilities have some potential to impact groundwater at the site. However, based on the relatively low potential for impact, we do not recommend additional investigation at this time unless King County requires a greater degree of certainty.

### 6.2.2 Other Regulated Materials

The NE Hangar site was inspected by King County on January 22, 1997 for suspected ACM and lead-containing materials. Bulk samples were collected on suspect ACM in each hangar. Laboratory results indicated that the window putty contains asbestos in Hangars 6653, 6677, and 6727. Asbestos-containing building materials were identified in the floor tile in room 10-W (Hangar 6727). Prior to demolition, the ACM must be removed from the buildings in compliance with Ecology and Puget Sound Air Pollution Control Agency Regulations. No suspect lead-containing materials were observed at the NE Hangar site.

No PCB-containing fluorescent light fixtures were observed onsite. There were no identified PCB-containing or PCB-contaminated electrical equipment onsite.

## 7.0 USE OF REPORT

This Phase 1 EA has been prepared for the exclusive use of King County for this project only. Our scope of services was developed in conjunction with King County involvement to achieve specific project objectives, with the intent of establishing an appropriate balance between level of effort and uncertainty. Providing this report to others not party to this mutual scope determination, or using it for other projects or purposes, can result in misunderstandings or incorrect assumptions. AGI and EcoChem cannot be responsible for interpretation or extrapolation of the data contained herein, except as stated in our conclusions.

Our conclusions are based on data described herein and our experience and professional judgement. The data were either made available to AGI and EcoChem or reasonably obtained within the practical constraints of our scope of services. Nothing can be done to eliminate all unknowns; however, we can help you take steps to lessen their impact. If you become aware of data we did not consider, or have any questions concerning our conclusions, please advise us immediately.

There is no such thing as a perfect due diligence and no practical study or procedure can or should be expected to discover all potential contamination. However, we believe this environmental assessment does represent due diligence as determined in accordance with professional standard of care. This standard is the current level of care and skill ordinarily exercised by members of the engineering profession practicing under similar conditions in the project area. AGI and EcoChem cannot be responsible if due diligence standards change or if you are required to meet a higher standard.

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**DISTRIBUTION**

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Attention: Ms. Pat Terrell

1 Copy

King County Division of Capital Planning and Development  
Department of Construction and Facilities Management  
Satellite Office @ Union Bank of California Building  
900 4<sup>th</sup> Avenue, Room 860  
Seattle, Washington 98164

Attention: Ms. Elizabeth Hill

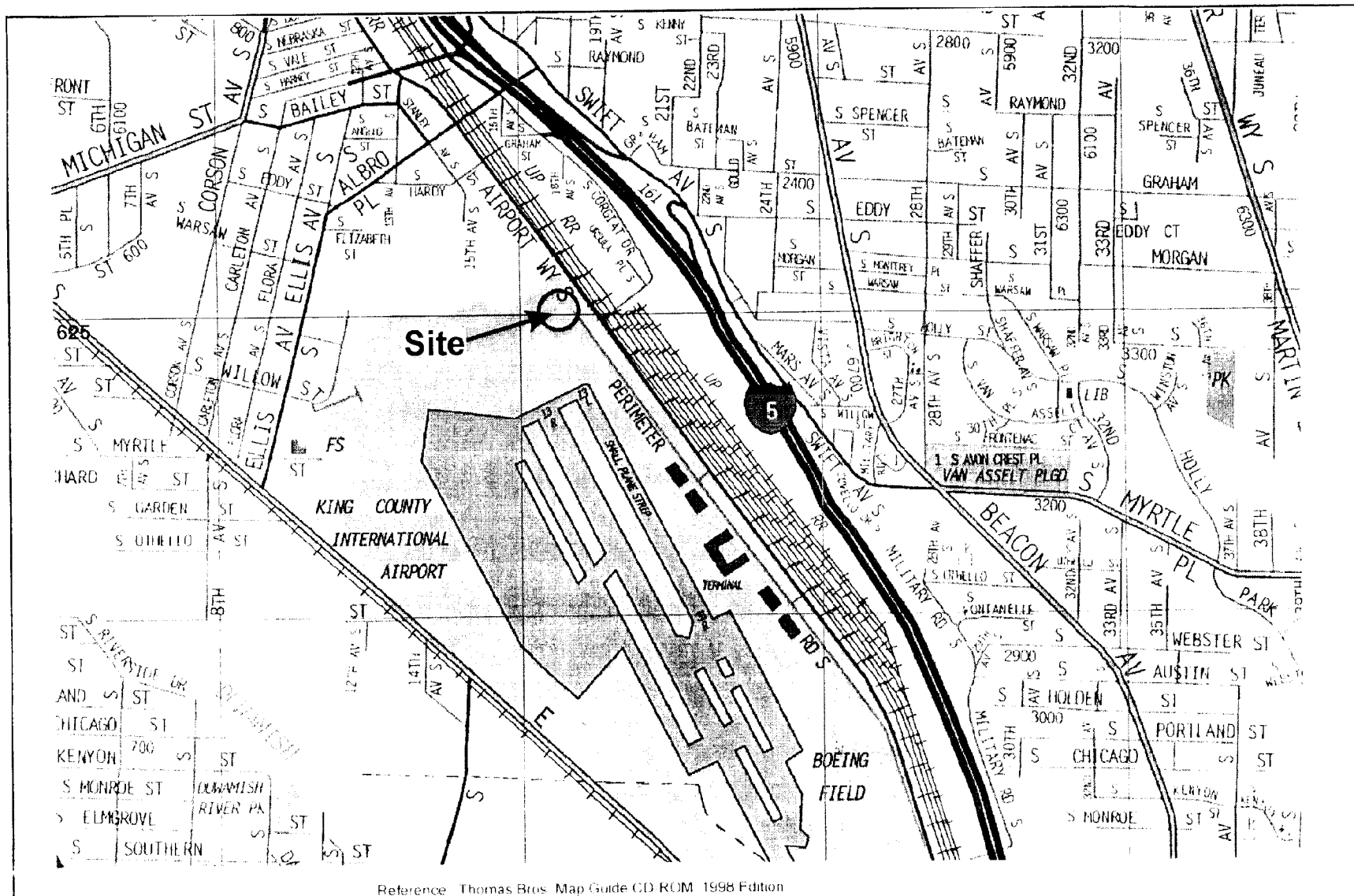
Quality Assurance / Technical Review by:

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Gary Laakso  
Principal

GLL/dhb





Reference: Thomas Bros. Map Guide CD-ROM, 1998 Edition



Not to Scale



Washington

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TECHNOLOGIES

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14-309-40-1

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DATE  
28 Apr 06

APPROVED

REVISED

FIGURE

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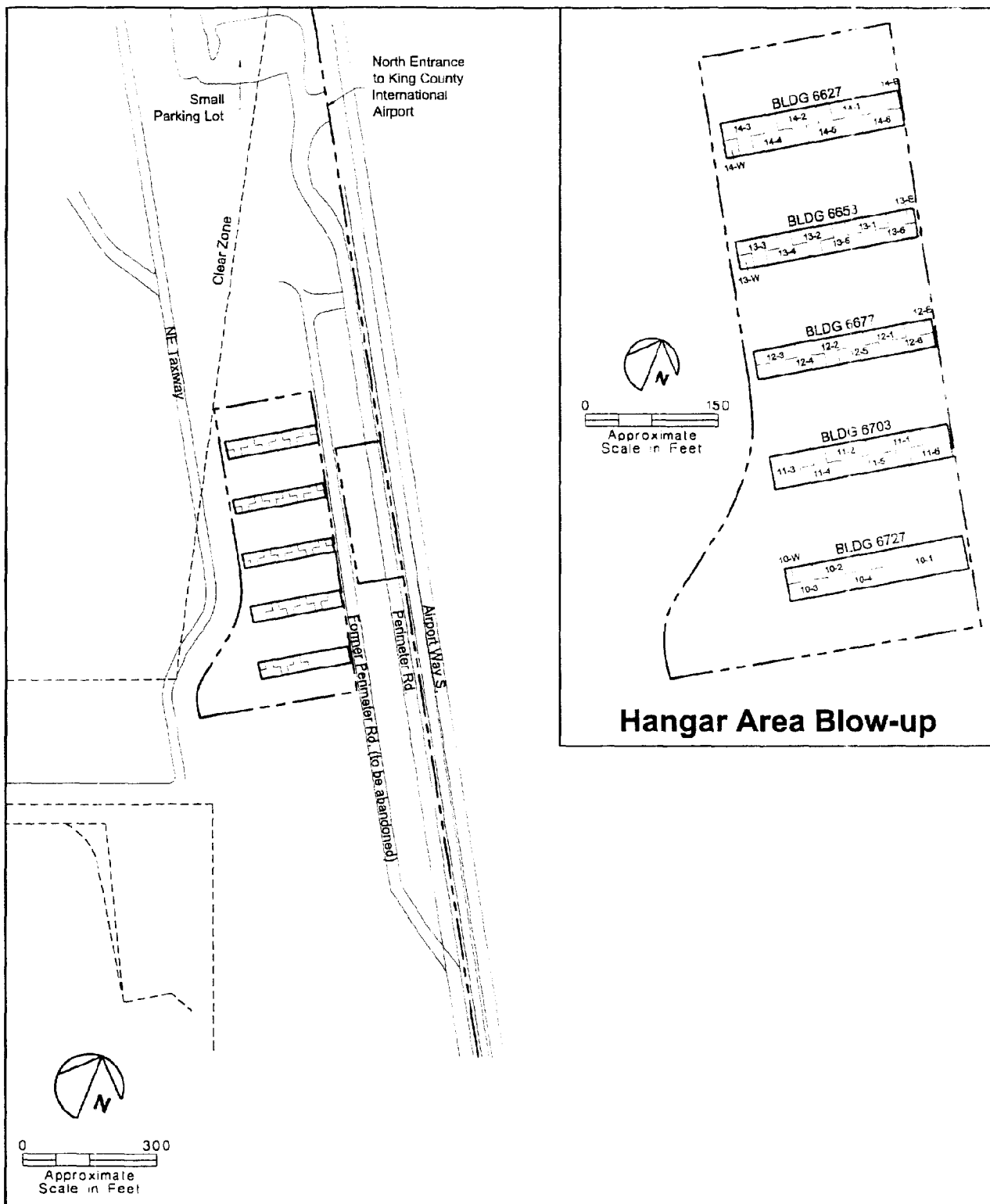
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## Vicinity Map

King County/N E Hangar Phase I EA  
King County, Washington

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28 Apr 98

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## Site Plan

King County/N.E. Hangar Phase I EA  
King County, Washington

FIGURE

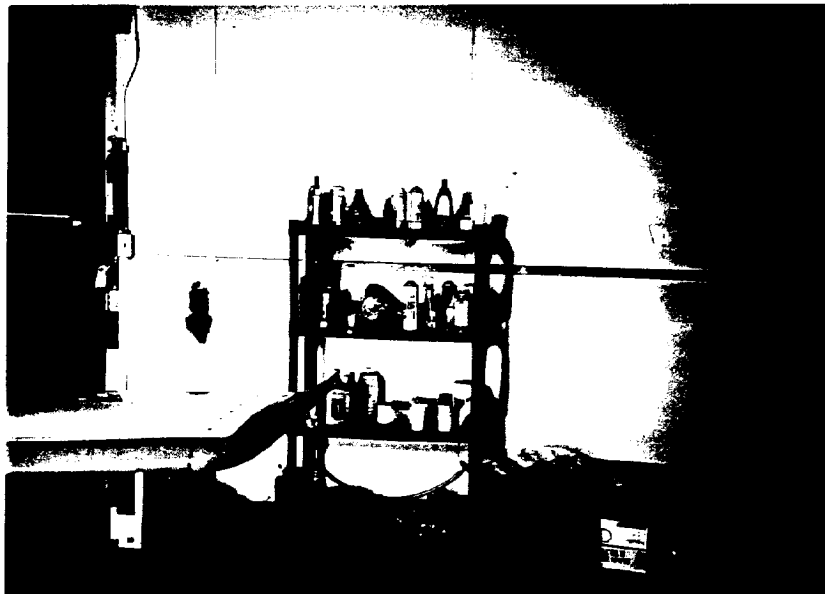
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**APPENDIX A**  
**SITE PHOTOGRAPHS**



View of Onsite Hangars



Typical Chemical Storage Inside Hangars.

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## Site Photographs

King County/NE Hangar Phase I EA  
King County, Washington

DATE  
4 May 98

APPROVED

REVISED

PLATE

**A1**

DATE

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SEA401499





**APPENDIX B**  
**TRANSACTION SCREEN QUESTIONNAIRE**

**Not included in this draft submittal.**

44-38861-6

KCSlp4 34958

SEA401503

**APPENDIX C**

**THE EDR-RADIUS MAP WITH GEOCHECK™;  
ORPHAN SUMMARY LIST; AND ERRORS LIST**

**Not included in this draft submittal.**

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SEA401506

**APPENDIX D**  
**U.S. GEOLOGICAL SURVEY TOPOGRAPHICAL MAPS**

**Not included in this draft submittal.**